

Amendments to the Claims:

The Applicant makes the following amendments to the Claims:

1. [Withdrawn] A data structure comprising:

a superset comprising a primary database operatively connected to one or more secondary databases, wherein each of said primary and one or more secondary databases comprises a first table operatively linked to one or more other tables, and each of said first and one or more other tables share a common data structure.

2. [Withdrawn] The data structure of claim 1, wherein each of said primary and one or more secondary databases are relational databases.

3. [Withdrawn] The data structure of claim 1, wherein said common data structure comprises a sparse matrix linked list.

4. [Withdrawn] The data structure of claim 1, wherein said common data structure comprises a plurality of records containing data, said records arranged in hierarchical order, in a series of levels from general to specific, based upon said data.

5. [Withdrawn] The data structure of claim 1, wherein:

said primary database includes source tables, a first secondary database includes alias tables, a second secondary database includes standardization tables, and a third secondary database is configured to accept and store input data.

6. [Withdrawn] The data structure of claim 5, wherein:

said source tables comprise data records obtained from a public or private source, said alias tables comprise one or more equivalent representations of a record, and said standardization tables comprise one or more standardized representations of a record.

7. [Withdrawn] The data structure of claim 6, wherein said source tables comprise

address records obtained from a government postal service and a commercial source.

8. [Withdrawn] The data structure of claim 1 for storing records comprising one or more artifacts, wherein: said first table includes preferred records, a first other table includes primary alias records, and a second other table includes secondary alias records.

9. [Withdrawn] The data structure of claim 8, wherein:

said preferred records comprise one or more preferred representations, said primary alias records comprise one or more equivalent representations of a primary artifact, and said secondary alias records comprising one or more equivalent representations of a secondary artifact.

10. [Withdrawn] The data structure of claim 9, wherein said preferred records comprise one or more preferred representations of an address.

11. [Withdrawn] A method of preparing data for optimal searching, said data stored in one or more databases comprising a plurality of linked tables of records, comprising:

arranging said records in each of said tables in hierarchical order, in a series of levels from general to specific, based upon said data; and transforming each of said tables into one or more sparse matrix linked list tables.

12. [Withdrawn] The method of claim 11, wherein said one or more databases exist in a server-client network environment, the method further comprising:

distributing a duplicate of said one or more sparse matrix linked list tables from a server to one or more clients.

13. [Withdrawn] The method of claim 11, wherein said one or more databases are relational databases interconnected to form a data superset.

14. [Withdrawn] The method of claim 11, wherein said data comprises address artifacts.

15. [Withdrawn] An apparatus for preparing data for optimal searching, said data stored in one or more databases comprising a plurality of linked tables of records, comprising:

a central processing unit; a memory; a basic input/output system; and program storage containing a program module executable by said central processing unit, said program module comprising:

means for arranging said records in each of said tables in hierarchical order, in a series of levels from general to specific, based upon said data; and means for transforming each of said tables into one or more sparse matrix linked list tables.

16. [Withdrawn] The apparatus of claim 15, further comprising:

one or more clients remote from said central processing unit, said program module further comprising: means for distributing a duplicate of said one or more sparse matrix linked list tables from a server to one or more clients.

17. [Withdrawn] A method of using a database of linked tables to convert a subjective representation into a preferred representation, comprising:

capturing said subjective representation and storing it in a first one of said linked tables; storing source data in a second one of said linked tables; locating one or more candidate representations from among said source data by comparing said subjective representation to said source data; selecting a preferred representation from among said one or more candidate representations, said preferred representation having the closest resemblance to said subjective representation; and releasing said preferred representation.

18. [Withdrawn] The method of claim 17, further comprising:

reviewing said source data to identify one or more select records containing preferred data; and adding a preferred token to said one or more select records;

19. [Withdrawn] The method of claim 17, wherein said step of selecting a preferred representation comprises identifying a preferred token associated with one of said one or more candidate representations.

20. [Withdrawn] The method of claim 17, wherein said step of locating one or more candidate representations further comprises:

(a) parsing said subjective representation into one or more discrete artifacts;

(b) selecting one of said one or more discrete artifacts:

(1) locating one or more candidate artifacts from among said source data by comparing said one discrete artifact to said source data;

(2) selecting a preferred artifact from among said one or more candidate artifacts, said preferred artifact having the closest resemblance to said one discrete artifact;

(3) storing said preferred artifact;

(c) repeating step (b) for each of said one or more discrete artifacts;

and

(d) combining said preferred artifacts to form a preferred representation.

21. [Withdrawn] The method of claim 17, wherein said step of locating one or more candidate representations further comprises:

storing alias data in a third one of said linked tables; reviewing said alias data to identify one or more select alias records containing a preferred alias representation; adding a preferred alias token to said one or more select alias records; locating one or

more candidate aliases from among said alias data by comparing said subjective representation to said alias data; selecting a preferred alias from among said one or more candidate aliases, said preferred alias being most closely associated with said preferred alias token; and releasing said preferred alias as a candidate representation.

22. [Withdrawn] The method of claim 21, wherein said step of locating one or more candidate aliases further comprises:

- (a) parsing said subjective representation into one or more discrete artifacts;
- (b) selecting one of said one or more discrete artifacts:
 - (1) locating one or more candidate alias artifacts from among said source data by comparing said one discrete artifact to said alias data;
 - (2) selecting a preferred alias artifact from among said one or more candidate alias artifacts, said preferred alias artifact being most closely associated with said preferred alias token;
 - (3) storing said preferred alias artifact;
- (c) repeating step (b) for each of said one or more discrete artifacts; and
- (d) adding said preferred alias artifact to said preferred alias.

23. [Withdrawn] An apparatus for using a database of linked tables to convert a subjective representation into a preferred representation, comprising: a central processing unit; a memory; a basic input/output system; and program storage containing a program module executable by said central processing unit, said program module comprising: means for capturing said subjective representation and storing it in a first one of said linked tables; means for storing source data in a second one of said linked tables; means for locating one or more candidate representations from among said source data by comparing said subjective representation to said source data; means for selecting a preferred representation from among said one or more candidate representations, said

preferred representation having the closest resemblance to said subjective representation;
and means for releasing said preferred representation.

24. [Withdrawn] The apparatus of claim 23, said program module further comprising:
means for reviewing said source data to identify one or more select records containing
preferred data; and means for adding a preferred token to said one or more select records;

25. [Withdrawn] The apparatus of claim 23, said program module further comprising:
means for identifying a preferred token associated with one of said one or more candidate
representations.

26. [Withdrawn] The apparatus of claim 23, wherein said means for locating one or more
candidate representations further comprises:

(a) means for parsing said subjective representation into one or more discrete
artifacts;

(b) means for selecting one of said one or more discrete artifacts:

(1) means for locating one or more candidate artifacts from among said
source data by comparing said one discrete artifact to said source data;

(2) means for selecting a preferred artifact from among said one or more
candidate artifacts, said preferred artifact having the closest resemblance to said
one discrete artifact;

(3) means for storing said preferred artifact; (c) means for repeating step
(b) for each of said one or more discrete artifacts; and (d) means for combining
said preferred artifacts to form a preferred representation.

27. [Withdrawn] The apparatus of claim 23, wherein said means for locating one or more
candidate representations further comprises: means for storing alias data in a third one of
said linked tables; means for reviewing said alias data to identify one or more select alias
records containing a preferred alias representation; means for adding a preferred alias

token to said one or more select alias records; means for locating one or more candidate aliases from among said alias data by comparing said subjective representation to said alias data; means for selecting a preferred alias from among said one or more candidate aliases, said preferred alias being most closely associated with said preferred alias token; and means for releasing said preferred alias as a candidate representation.

28. [Withdrawn] The apparatus of claim 27, wherein said means for locating one or more candidate aliases further comprises: (a) means for parsing said subjective representation into one or more discrete artifacts; (b) means for selecting one of said one or more discrete artifacts: (1) means for locating one or more candidate alias artifacts from among said source data by comparing said one discrete artifact to said alias data; (2) means for selecting a preferred alias artifact from among said one or more candidate alias artifacts, said preferred alias artifact being most closely associated with said preferred alias token; (3) means for storing said preferred alias artifact; (c) means for repeating step (b) for each of said one or more discrete artifacts; and (d) means for adding said preferred alias artifact to said preferred alias.

29. [Previously Presented] A method of controlling access to a database by one or more external applications, comprising:

establishing and storing a plurality of rule sets, each correlated to one of said one or more external applications;

receiving a request from a first application;

retrieving a first rule set correlated to said first application; and

applying said first rule set to control the interaction between said first application and said database.

30. [Previously Presented] The method of claim 29, wherein said first rule set includes a list of data available for capture from said database for use by said first application.

31. [Previously Presented] A method of controlling the depth of data capture within a database in response to a request from one or more external applications, comprising: establishing and storing a plurality of rule sets, each correlated to one of said one or more external applications, each of said plurality of rule sets including a list of data to capture from said database; receiving a request from a first application; retrieving a first rule set correlated to said first application; and applying said first rule set to limit the data available to said first application from said database.

32. [Previously Presented] A data structure comprising: a database linking a primary table and one or more secondary tables, each of said tables sharing a common data structure; said database controlled by a database management system configured to transform one or more of said tables into a sparse matrix linked list.

33. [Previously Presented] The data structure of claim 32, wherein said database comprises one or more interconnected relational databases.

34. [Previously Presented] The data structure of claim 32, wherein said database management system comprises an interface and a validation module.

35. [Previously Presented] The data structure of claim 34, wherein said interface controls access to said database by one or more external applications.

36. [Previously Presented] The data structure of claim 32, wherein said database management system is further configured to convert data from a subjective representation into a preferred representation.

37. [Previously Presented] A data structure for use in a database management system, comprising: a first table of values representing preferred characterizations of a parameter; a second table of values representing input data characterizing a parameter; a third table of values arranged in a hierarchy to facilitate the process of matching said input data to a corresponding preferred characterization, wherein each of said tables comprises a sparse

matrix linked list.

38. [Previously Presented] A method for characterizing a parameter, comprising: receiving input data characterizing a parameter in a first table; modifying said input data in accordance with a table of alias characterizations stored in a second table; and matching the modified input data to a preferred characterization stored in a third table.

39. [Previously Presented] An address management system comprising:

a superset comprising a primary database operatively connected to one or more secondary databases, each of said databases comprising a plurality of linked tables, and each of said tables sharing a common data structure;

an enhancement module configured to transform one or more of said tables into a sparse matrix linked list;

a publication and subscription module for controlling the distribution of data in a server-client network environment;

a matching and validation module for converting a subjective representation of an address into a preferred representation of said address;

and an interface for controlling access to said superset by one or more external applications.

40. [Previously Presented] The system of claim 39, wherein said enhancement module is further configured to arrange the records of one or more of said tables in hierarchical order, in a series of levels from general to specific, based upon said data.

41. [Previously Presented] The system of claim 39, wherein: said primary database includes source tables, a first secondary database includes alias tables, a second secondary database includes standardization tables, and a third secondary database is configured to accept and store input data.

42. [Previously Presented] The system of claim 41, wherein: said source tables comprise data records obtained from a public or private source, said alias tables comprise one or more equivalent representations of a record, and said standardization tables comprise one or more standardized representations of a record.

43. [Previously Presented] The system of claim 42, wherein said source tables comprise address records obtained from a government postal service and a commercial source.

44. [Previously Presented] The system of claim 40 for storing records comprising one or more address artifacts, wherein: a first table includes preferred records, a second table includes primary alias records, and a third table includes secondary alias records.

45. [Previously Presented] The system of claim 44, wherein: said preferred records comprise one or more preferred representations, said primary alias records comprise one or more equivalent representations of a primary address artifact, and said secondary alias records comprising one or more equivalent representations of a secondary address artifact.